

AD-A100 445 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/6 4/2
19304 MLRS MISSILE NUMBER 001, ROUND NO. V134/MD-1, 17 APRIL 19--ETC(U)
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9 METEOROLOGICAL DATA REPORT

19304 MLRS
Missile 001
Round No. V134/MD-1,
17 April 1981,

By

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Programs Coordinator
WS Meteorological Team

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ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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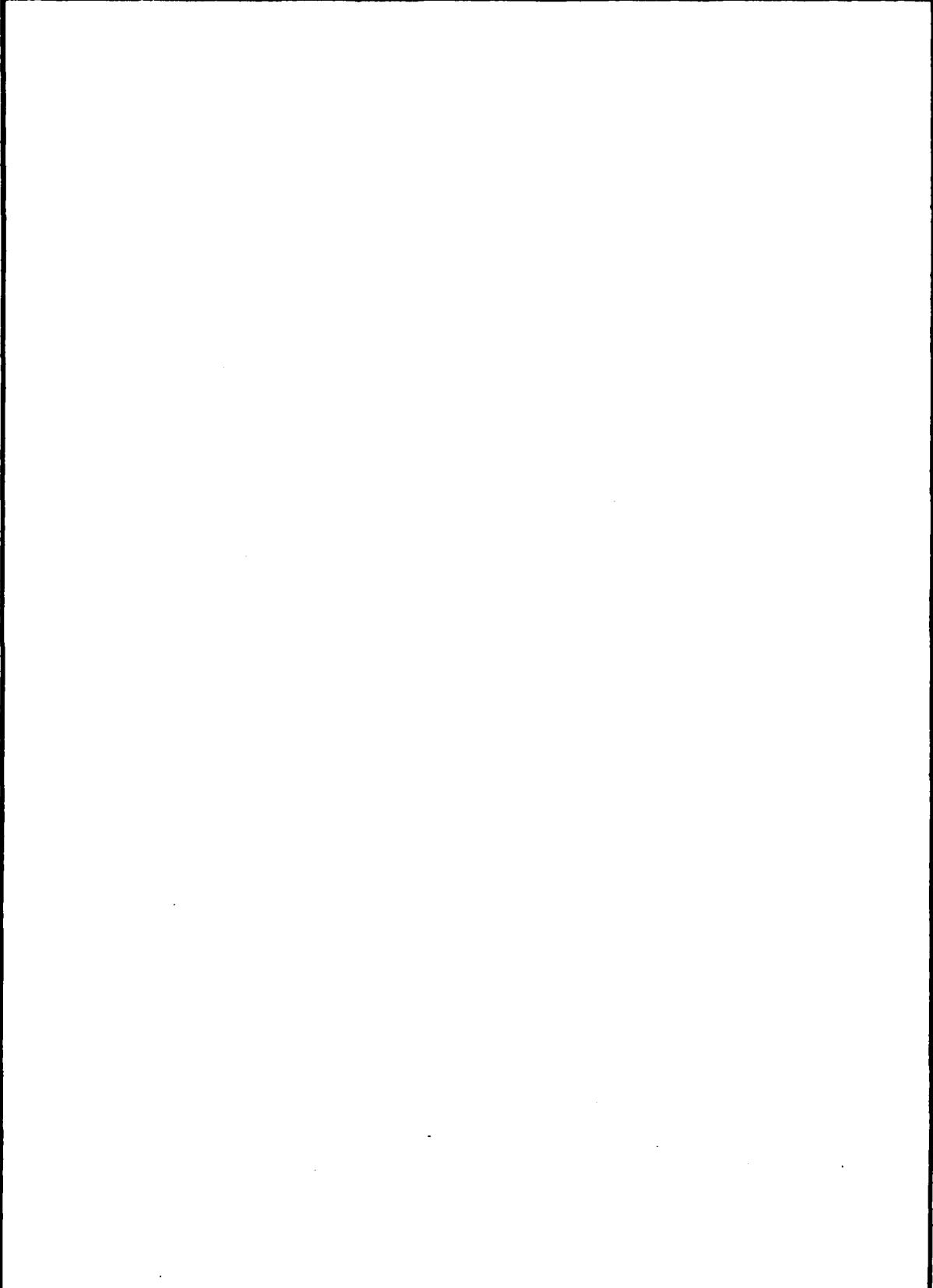
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| 20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19304 MLRS, Missile No. 001, Round No. V134/MD-1, presented in tabular form. | | |

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CONTENTS

| | |
|---|----|
| INTRODUCTION----- | 1 |
| DISCUSSION----- | 1 |
| MAP----- | 2 |
| TABLES | |
| 1. Surface Observation taken at 0939 MST at LC-33----- | 3 |
| 2. Anemometer-Measured Wind Speed and Direction, Lc-33 Fixed Pole, taken at 0939 MST----- | 4 |
| 3. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, taken at 0939 MST----- | 4 |
| 4. T-Time Pilot Balloon Measured Wind Data at LC-33 and NICK Site at 0939 MST----- | 5 |
| 5. Aiming and T-Time Computer Met Messages----- | 6 |
| 6. LC-37 Significant Level Data at 0530 MST----- | 7 |
| 7. LC-37 Upper Air Data at 0530 MST----- | 8 |
| 8. LC-37 Mandatory Levels at 0530 MST----- | 10 |
| 9. WSD Significant Level Data at 0630 MST----- | 11 |
| 10. WSD Upper Air Data at 0630 MST----- | 12 |
| 11. WSD Mandatory Levels at 0630 MST----- | 14 |
| 12. LC-37 Significant Level Data at 0730 MST----- | 15 |
| 13. LC-37 Upper Air Data at 0730 MST----- | 16 |
| 14. LC-37 Mandatory Levels at 0730 MST----- | 18 |
| 15. WSD Significant Level Data at 0830 MST----- | 19 |
| 16. WSD Upper Air Data at 0830 MST----- | 20 |
| 17. WSD Mandatory Levels at 0830 MST----- | 22 |
| 18. WSD Significant Level Data at 0930 MST----- | 23 |
| 19. WSD Upper Air Data at 0930 MST----- | 24 |
| 20. WSD Mandatory Levels at 0930 MST----- | 26 |

INTRODUCTION

19304D MLRS, Missile Number 001, Round Number V134/MD-1, was launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 0939 MST on 17 April 1981. The scheduled launch time was 0930.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature (°C), relative humidity, dew point (°C), density (gm/m³), wind direction and speed, and cloud cover were made at the LC-33 met site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from Single Theodite observations at:

SITE AND ALTITUDE

| | |
|-------|-------------|
| LC-33 | 720 Meters |
| NICK | 1560 Meters |

(b) Air structure data (rawinsonde) were collected at the following met sites.

SITE AND TIME

| | |
|-------|----------|
| LC-37 | 0530 MST |
| WSD | 0630 MST |
| LC-37 | 0730 MST |
| WSD | 0830 MST |
| WSD | 0930 MST |

| | |
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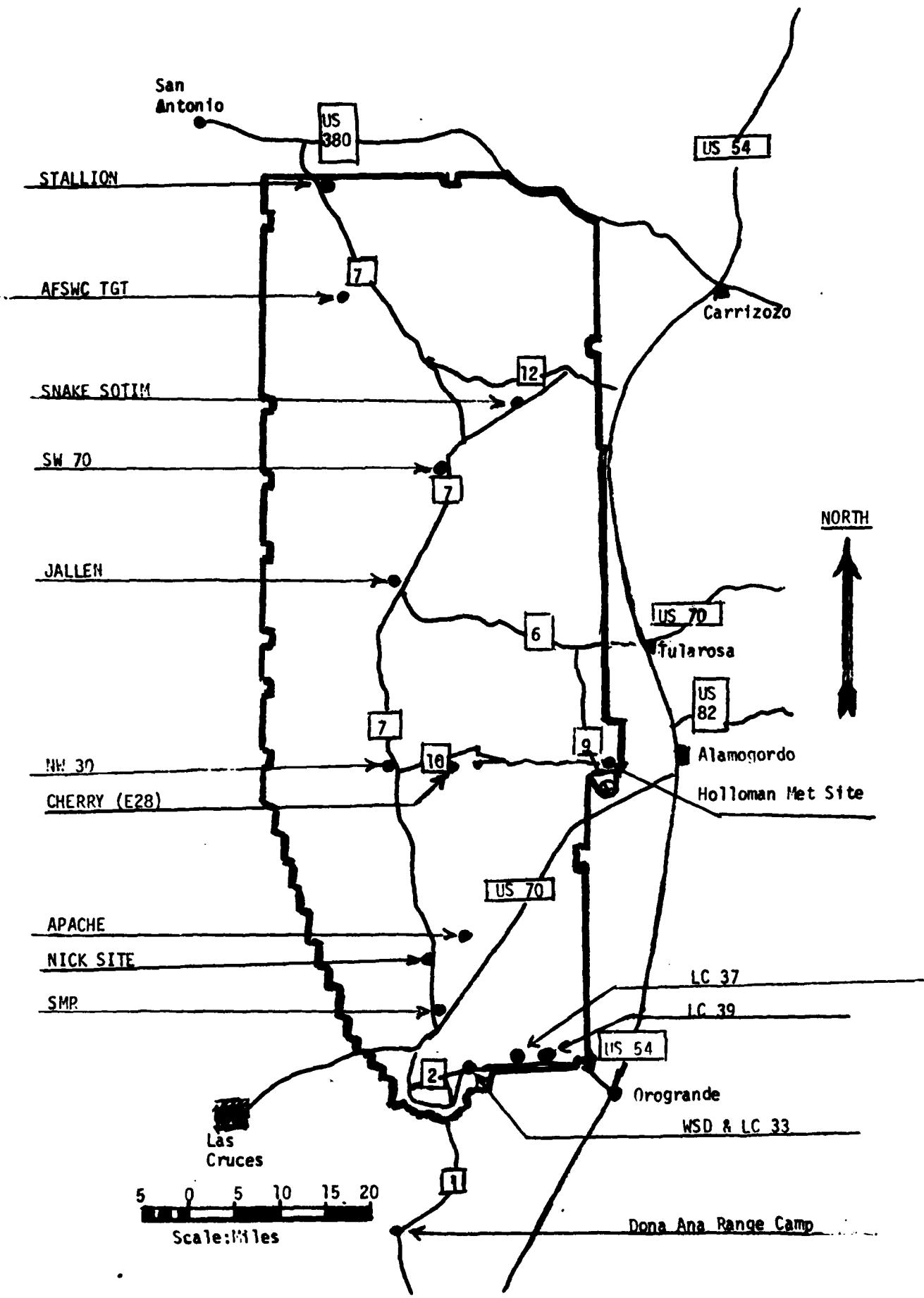


TABLE 1. Surface Observations taken at 0939 MST,
17 April 1981, at LC-33, 19304 MLRS,
Missile Number 001, Round Number V134/MD-1.

| | | |
|-------------------|-------|-------------------|
| ELEVATION | 3983 | FT/MSL |
| PRESSURE | 883.8 | MBS |
| TEMPERATURE | 17.0 | °C |
| RELATIVE HUMIDITY | 71 | % |
| DEW POINT | 11.6 | °C |
| DENSITY | 1052 | GM/M ³ |
| WIND SPEED | 02 | KTS |
| WIND DIRECTION | 150 | DEGREES |
| CLOUD COVER | 10/AS | AMT/TYPE |

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS
Taken at 0939 MST.

| POLE #1 | | | POLE #2 | | | POLE #3 | | |
|------------|---------|-----------|------------|---------|-----------|------------|---------|-----------|
| T-TIME SEC | DIR DEG | SPEED KTS | T-TIME SEC | DIR DEG | SPEED KTS | T-TIME SEC | DIR DEG | SPEED KTS |
| T30 | 141 | 01 | T-30 | 150 | 01 | T-30 | 145 | 01 |
| T-20 | 138 | 02 | T-20 | 143 | 01 | T-20 | 145 | 02 |
| T-10 | 138 | 02 | T-10 | 143 | 01 | T-10 | 145 | 01 |
| T0.0 | 120 | 01 | T0.0 | 142 | 01 | T0.0 | 145 | 01 |
| T+10 | 119 | 02 | T+10 | 138 | 01 | T+10 | 145 | 02 |

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

| LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base) | | | LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base) | | |
|--|---------|-----------|--|---------|-----------|
| T-TIME SEC | DIR DEG | SPEED KTS | T-TIME SEC | DIR DEG | SPEED KTS |
| T-30 | 142 | 03 | T-30 | 145 | 05 |
| T-20 | 150 | 03 | T-20 | 151 | 04 |
| T-10 | 150 | 02 | T-10 | 149 | 04 |
| T0.0 | 150 | 02 | T0.0 | 149 | 04 |
| T+10 | 150 | 02 | T+10 | 148 | 03 |

| LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base) | | | LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base) | | |
|---|---------|-----------|--|---------|-----------|
| T-TIME SEC | DIR DEG | SPEED KTS | T-TIME SEC | DIR DEG | SPEED KTS |
| T-30 | 140 | 04 | T-30 | 147 | 05 |
| T-20 | 139 | 02 | T-20 | 147 | 04 |
| T-10 | 139 | 02 | T-10 | 144 | 04 |
| T0.0 | 139 | 03 | T0.0 | 144 | 03 |
| T+10 | 139 | 03 | T+10 | 140 | 03 |

TABLE 4

T-TIME PILOT-BALLOON MEASURED WIND DATA

LC33 0939 MST
 WSTM COORDINATES:
 X= 486,037.24
 Y= 182,350.16
 H= 3977.30

NICK 0939 MST
 WSTM COOORDINATES:
 X= 470,734.56
 Y= 255,775.64
 H= 4126.57

| HEIGHT METERS AGL | DIRECTION DEGREES | SPEED KNOTS | HEIGHT METERS AGL | DIRECTION DEGREES | SPEED KNOTS |
|----------------------|----------------------|----------------|----------------------|----------------------|----------------|
| SURFACE | 150 | 02 | SURFACE | | CALM |
| 60 | | MISG | 60 | 017 | 02 |
| 120 | | MISG | 120 | 017 | 03 |
| 180 | 274 | 03 | 180 | 025 | 02 |
| 240 | 235 | 01 | 240 | 110 | 01 |
| 300 | 325 | 04 | 300 | 184 | 01 |
| 360 | 340 | 04 | 360 | 197 | 02 |
| 420 | 033 | 03 | 420 | 204 | 03 |
| 480 | 008 | 04 | 480 | 207 | 03 |
| 540 | 351 | 04 | 540 | 209 | 02 |
| 600 | 280 | 02 | 600 | 234 | 01 |
| 660 | 312 | 02 | 660 | 299 | 01 |
| 720 | 326 | 03 | 720 | 304 | 02 |
| | | | 780 | 304 | 02 |
| | | | 840 | 301 | 02 |
| | | | 900 | 294 | 02 |
| | | | 960 | 282 | 02 |
| | | | 1020 | 282 | 02 |
| | | | 1080 | 290 | 02 |
| | | | 1140 | 349 | 02 |
| | | | 1200 | 021 | 03 |
| | | | 1260 | 034 | 04 |
| | | | 1320 | 028 | 04 |
| | | | 1380 | 020 | 04 |
| | | | 1440 | 011 | 05 |
| | | | 1500 | 008 | 05 |
| | | | 1560 | 009 | 05 |

END OF DATA

TABLE 5

AIMING AND T-TIME COMPUTER MET MESSAGES
17 APRIL 1981

| | | |
|-------------------|-------------------|-------------------|
| LC37 0530 MST | WSD 0630 MST | LC37 0730 MST |
| METCM1325064 | METCM1325065 | METCM1325064 |
| 171250124880 | 171350122882 | 171450124881 |
| 00373004 28850880 | 00000000 28830882 | 00000000 28900881 |
| 01317011 28900870 | 01307002 28830872 | 01000000 28920871 |
| 02561004 28980845 | 02033007 28850846 | 02039004 28930846 |
| 03605008 28810806 | 03031007 28720807 | 03049006 28790807 |
| 04052003 28440759 | 04617003 28340760 | 04063004 28470760 |
| 05129004 28030715 | 05174003 27970716 | 05180003 28030716 |
| 06148015 27640672 | 06128013 27600673 | 06123013 27630673 |
| 07169012 27230632 | 07157016 27140632 | 07152015 27230633 |
| 08198014 26790593 | 08191012 26670594 | 08176014 26800594 |

| | |
|-------------------|-------------------|
| WSD 0830 MST | WSD 0930 MST |
| METCM1325065 | METCM1325065 |
| 171550122883 | 171650122883 |
| 00000000 29040883 | 00000000 29210883 |
| 01483001 28890873 | 01285003 28950873 |
| 02022005 28810847 | 02209001 28710847 |
| 03056005 28440808 | 03134001 28500808 |
| 04101004 28250761 | 04083006 28330761 |
| 05117003 28171716 | 05109005 27960716 |
| 06123011 27510673 | 06112012 27460673 |
| 07151015 27110633 | 07132016 27010632 |
| 08163014 26490594 | 08142017 26660594 |

STATION ALTITUDE 4651.37 FEET MSL
 17 APR. 81 0530 HRS. MST
 ASCENSION NO. 24

SIGNIFICANT LEVEL DATA
 1070180024
 LC-37
 TABLE 6

GEODETIC COORDINATES
 32.40175 LAT UEG
 106.31232 LON DEG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE METERS MSL | TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE | REL.HUM. PERCENT |
|-----------------------|-------------------------------------|--|---------------------|
| 880.3 | 4051.4 | 14.1 | 75.0 |
| 850.0 | 5026.6 | 15.6 | 63.0 |
| 804.6 | 6553.8 | 13.8 | 59.0 |
| 779.0 | 7447.4 | 12.0 | 60.0 |
| 719.8 | 9603.5 | 6.5 | 71.0 |
| 700.0 | 10354.7 | 5.0 | 66.0 |
| 661.8 | 11852.3 | 1.8 | 54.0 |
| 645.4 | 12515.9 | .2 | 54.0 |
| 606.0 | 14163.7 | -4.2 | 84.0 |
| 598.0 | 14508.0 | -5.1 | 84.0 |
| 582.4 | 15189.5 | -6.8 | 84.0 |
| 574.4 | 15544.3 | -7.6 | 74.0 |
| 559.0 | 16237.8 | -9.5 | -15.6 |
| 544.0 | 16927.6 | -10.8 | -14.5 |
| 542.5 | 16997.4 | -11.1 | -12.1 |
| 536.2 | 17292.7 | -11.1 | -12.5 |
| 528.6 | 17653.3 | -11.3 | -16.0 |
| 521.0 | 18019.0 | -11.3 | -14.5 |
| 506.0 | 18756.3 | -11.7 | -16.2 |
| 500.0 | 19057.1 | -11.6 | -19.0 |
| 434.0 | 22572.4 | -19.6 | -26.3 |
| 420.2 | 23360.2 | -21.0 | -25.6 |
| 412.8 | 23791.7 | -21.7 | -20.0 |
| 400.0 | 24552.7 | -23.5 | -26.4 |
| 392.8 | 24989.0 | -24.6 | -30.1 |
| 386.4 | 25381.8 | -25.7 | -29.8 |
| 379.6 | 25804.6 | -26.7 | -30.2 |
| 366.6 | 26629.4 | -28.7 | -34.0 |
| 347.6 | 27876.4 | -31.6 | -36.7 |
| 317.2 | 29980.9 | -37.8 | -42.8 |
| 300.0 | 31237.2 | -41.2 | -46.7 |
| 282.0 | 32611.0 | -44.7 | -50.1 |
| 250.0 | 35225.2 | -51.6 | -54.0 |

STATION ALTITUDE 4051.37 FEET MSL
17 APR. 81 0530 HRS MST
ASCENSION NO. 24

UPPER AIR DATA
1070180024
LC-37
TABLE 7

GEODETIC COORDINATES
32°40'17.5" LAT DEG
106°31'23.2" LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CURIC METER | SPEED OF SOUND KNOTS | DIRECTION DEGREES(TN) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--|------------------|------------------------|----------------------|-----------------------|-----------------------|---------------------|
| 4051.4 | 860.3 | 14.1 | 9.7 | 75.0 | 1062.1 | 662.0 | 210.0 | 4.1 |
| 4500.0 | 866.2 | 14.8 | 9.3 | 69.5 | 1042.7 | 662.8 | 242.4 | 1.000286 |
| 5000.0 | 850.8 | 15.6 | 8.6 | 63.3 | 1021.5 | 663.6 | 298.6 | 1.000279 |
| 5500.0 | 835.7 | 15.0 | 7.8 | 61.8 | 1005.3 | 662.9 | 324.5 | 1.000272 |
| 6000.0 | 820.8 | 14.5 | 6.9 | 60.5 | 989.6 | 662.2 | 334.6 | 1.000266 |
| 6500.0 | 806.2 | 13.9 | 6.0 | 59.1 | 974.2 | 661.5 | 341.5 | 1.000260 |
| 7000.0 | 791.7 | 12.9 | 5.2 | 59.5 | 960.1 | 660.3 | 352.2 | 1.000255 |
| 7500.0 | 777.5 | 11.9 | 4.4 | 60.3 | 946.4 | 659.0 | 33.2 | 1.000250 |
| 8000.0 | 763.4 | 10.6 | 3.8 | 62.8 | 933.5 | 657.5 | 19.1 | 1.000246 |
| 8500.0 | 749.5 | 9.3 | 3.2 | 65.4 | 920.8 | 656.0 | 39.7 | 1.000242 |
| 9000.0 | 735.9 | 8.0 | 2.5 | 67.9 | 908.3 | 654.5 | 69.6 | 1.000237 |
| 9500.0 | 722.5 | 6.8 | 1.8 | 70.5 | 896.0 | 653.0 | 77.7 | 1.000233 |
| 10000.0 | 709.3 | 5.7 | .3 | 68.4 | 883.1 | 651.6 | 74.1 | 1.000227 |
| 10500.0 | 696.2 | 4.7 | -1.3 | 64.8 | 870.3 | 650.3 | 75.6 | 1.000221 |
| 11000.0 | 683.3 | 3.6 | -3.2 | 60.8 | 857.7 | 649.0 | 77.7 | 1.000215 |
| 11500.0 | 670.6 | 2.6 | -5.1 | 56.8 | 845.3 | 647.6 | 80.7 | 13.6 |
| 12000.0 | 658.1 | 1.4 | -6.8 | 54.0 | 833.0 | 646.2 | 64.6 | 1.000204 |
| 12500.0 | 645.8 | .2 | -8.0 | 54.0 | 821.3 | 644.8 | 88.9 | 15.3 |
| 13000.0 | 633.6 | -1.1 | -7.3 | 62.8 | 809.6 | 643.3 | 95.1 | 14.4 |
| 13500.0 | 621.6 | -2.4 | -6.8 | 71.9 | 798.0 | 641.7 | 101.8 | 13.5 |
| 14000.0 | 609.8 | -3.6 | -6.5 | 81.0 | 786.8 | 640.2 | 108.7 | 12.6 |
| 14500.0 | 596.2 | -5.1 | -7.4 | 84.0 | 775.6 | 638.6 | 114.3 | 12.4 |
| 15000.0 | 586.7 | -6.3 | -8.6 | 84.0 | 764.4 | 637.0 | 116.5 | 13.2 |
| 15500.0 | 575.4 | -7.5 | -11.1 | 75.2 | 753.5 | 635.5 | 120.4 | 13.7 |
| 16000.0 | 564.2 | -8.8 | -14.1 | 65.5 | 742.7 | 635.8 | 126.2 | 14.0 |
| 16500.0 | 553.2 | -10.0 | -15.1 | 65.9 | 731.4 | 632.4 | 132.8 | 13.6 |
| 17000.0 | 542.4 | -11.1 | -12.1 | 92.0 | 719.9 | 631.2 | 142.2 | 12.2 |
| 17500.0 | 531.8 | -11.2 | -14.4 | 76.9 | 706.3 | 631.0 | 148.0 | 12.3 |
| 18000.0 | 521.4 | -11.3 | -14.6 | 76.5 | 692.7 | 630.9 | 151.3 | 13.3 |
| 18500.0 | 511.2 | -11.6 | -15.6 | 71.8 | 679.8 | 630.5 | 147.5 | 13.3 |
| 19000.0 | 501.1 | -11.6 | -18.4 | 56.8 | 666.8 | 630.4 | 141.7 | 13.1 |
| 19500.0 | 491.2 | -12.6 | -19.9 | 54.1 | 656.1 | 629.1 | 132.2 | 11.9 |
| 20000.0 | 481.4 | -13.7 | -21.0 | 54.3 | 645.9 | 627.7 | 116.9 | 10.5 |
| 20500.0 | 471.8 | -14.9 | -22.0 | 54.4 | 635.8 | 626.3 | 99.8 | 9.9 |
| 21000.0 | 464.4 | -16.0 | -23.0 | 54.6 | 625.9 | 624.9 | 85.9 | 10.1 |
| 21500.0 | 453.2 | -17.2 | -24.1 | 54.7 | 616.2 | 623.5 | 73.2 | 10.9 |
| 22000.0 | 444.1 | -18.3 | -25.1 | 54.8 | 606.7 | 622.1 | 66.7 | 10.6 |
| 22500.0 | 435.3 | -19.4 | -26.2 | 55.0 | 597.3 | 620.7 | 60.0 | 10.4 |
| 23000.0 | 426.5 | -20.4 | -25.9 | 61.0 | 587.3 | 619.6 | 58.6 | 8.5 |
| 23500.0 | 417.6 | -21.2 | -25.8 | 66.6 | 577.3 | 618.6 | 58.8 | 6.1 |

STATION ALTITUDE 4051.37 FEET MSL
17 APR. 61 0530 HRS MST
ASCENSION NO. 24

UPPER AIR DATA
1070160024
C-37
TABLE 7 CON'T

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES | DEWPOINT DEGREES | REL.HUM. PERCENT | DENSITY METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES(TN) | SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|-------------------------|------------------|------------------|---------------|----------------------|---------------------------------|-------------|---------------------|
| 24000.0 | 409.3 | -222.2 | -26.6 | 66.9 | 567.7 | 617.4 | 70.1 | 4.5 | 1.000131 |
| 24500.0 | 400.9 | -23.4 | -28.2 | 64.3 | 558.8 | 615.9 | 93.8 | 3.7 | 1.000128 |
| 25000.0 | 392.6 | -24.6 | -30.1 | 60.2 | 550.1 | 614.3 | 109.8 | 4.0 | 1.000126 |
| 25500.0 | 384.5 | -26.0 | -29.9 | 69.1 | 541.6 | 612.6 | 106.3 | 5.0 | 1.000124 |
| 26000.0 | 376.5 | -27.2 | -31.1 | 69.2 | 532.9 | 611.1 | 104.0 | 6.0 | 1.000122 |
| 26500.0 | 368.6 | -28.4 | -33.4 | 61.9 | 524.4 | 609.6 | 116.2 | 6.4 | 1.000119 |
| 27000.0 | 360.8 | -29.6 | -34.8 | 60.0 | 515.9 | 608.1 | 128.0 | 7.2 | 1.000117 |
| 27500.0 | 353.2 | -30.7 | -35.9 | 60.0 | 507.4 | 606.7 | 139.0 | 8.3 | 1.000115 |
| 28000.0 | 345.7 | -32.0 | -37.1 | 59.9 | 499.2 | 605.1 | 151.7 | 10.8 | 1.000113 |
| 28500.0 | 338.3 | -33.4 | -38.5 | 59.7 | 491.5 | 605.2 | 159.3 | 13.6 | 1.000111 |
| 29000.0 | 331.0 | -34.9 | -40.0 | 59.5 | 483.9 | 601.4 | 162.0 | 16.2 | 1.000109 |
| 29500.0 | 323.9 | -36.4 | -41.4 | 59.2 | 476.5 | 599.5 | 162.0 | 17.8 | 1.000107 |
| 30000.0 | 316.9 | -37.9 | -42.9 | 58.9 | 469.1 | 597.6 | 161.3 | 19.3 | 1.000105 |
| 30500.0 | 310.0 | -39.2 | -44.4 | 57.3 | 461.5 | 595.9 | 162.2 | 21.0 | 1.000104 |
| 31000.0 | 303.2 | -40.6 | -45.9 | 55.8 | 454.0 | 594.2 | 164.5 | 22.9 | 1.000102 |
| 31500.0 | 296.5 | -41.9 | -47.3 | 54.8 | 446.5 | 592.5 | 166.4 | 24.8 | 1.000100 |
| 32000.0 | 289.9 | -43.1 | -48.6 | 54.4 | 439.0 | 590.9 | 169.2 | 27.0 | 1.000098 |
| 32500.0 | 283.4 | -44.4 | -49.8 | 54.1 | 431.6 | 589.2 | 173.3 | 29.7 | 1.000097 |
| 33000.0 | 277.0 | -45.7 | -52.4 | 46.0** | 424.3 | 587.5 | 176.7 | 32.5 | 1.000095 |
| 33500.0 | 270.7 | -47.0 | -55.7 | 35.6** | 417.0 | 585.8 | | | 1.000093 |
| 34000.0 | 264.5 | -48.4 | -59.6 | 25.3** | 409.9 | 584.1 | | | 1.000091 |
| 34500.0 | 258.5 | -49.7 | -64.7 | 15.0** | 403.0 | 582.4 | | | 1.000090 |
| 35000.0 | 252.6 | -51.0 | -73.8 | 4.7** | 396.1 | 580.6 | | | 1.000088 |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FEET MSL
17 APR. 01 0530 HRS MST
ASCENSION NO. 24

MANDATORY LEVELS
1070180024
LC-37
TABLE 8

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

| PRESSURE MILLIBARS | GEOPOTENTIAL FEET | TEMPERATURE | | | REL.HUM. PERCENT | WIND DATA DIRECTION DEGREES (TN) | SPEED KNOTS |
|-----------------------|----------------------|----------------|------------------------|--------------------|---------------------|--|----------------|
| | | AIR DEGREES | DEWPOINT CENTIGRADE | WIND CENTIGRADE | | | |
| 850.0 | 5023. | 15.6 | 8.6 | 63. | 300.0 | 3.0 | |
| 800.0 | 6707. | 13.5 | 5.7 | 59. | 345.5 | 7.3 | |
| 750.0 | 8490. | 9.4 | 3.2 | 65. | 39.0 | 2.2 | |
| 700.0 | 10344. | 5.0 | -.8 | 66. | 74.5 | 6.9 | |
| 650.0 | 12315. | .7 | -7.6 | 54. | 86.9 | 15.6 | |
| 600.0 | 14405. | -4.9 | -7.1 | 84. | 113.9 | 12.3 | |
| 550.0 | 16628. | -10.3 | -14.9 | 69. | 135.3 | 13.1 | |
| 500.0 | 19030. | -11.6 | -19.0 | 54. | 141.1 | 13.1 | |
| 450.0 | 21651. | -17.6 | -24.4 | 55. | 71.0 | 10.7 | |
| 400.0 | 24512. | -23.5 | -28.4 | 64. | 96.1 | 3.6 | |
| 350.0 | 27665. | -31.2 | -36.4 | 60. | 144.9 | 9.2 | |
| 300.0 | 31175. | -41.2 | -46.7 | 55. | 165.4 | 23.8 | |
| 250.0 | 35148. | -51.6 | | | | | |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL
17 APR. 1974 0630 HRS MST
ASCESSION NO. 274

SIGNIFICANT LEVEL DATA
10700-0274
WHITE SKIES
TABLE 9

UTDOLIC COORDINATES
52.40003 LAT LEG
106.37033 LONG LEG

| PRESSURE GEOMETRIC MILLIBARS MSL FEET | ALTIMETER DEGREES CENTIGRANE | TEMPERATURE AIR DEPOINT DEGREES CENTIGRANE | REL. HUM. PERCENT |
|--|---------------------------------|--|----------------------|
| 682.0 | 3989.0 | 14.0 | 9.2 |
| 650.0 | 5015.7 | 14.5 | 9.2 |
| 620.2 | 6007.8 | 14.5 | 66.0 |
| 791.0 | 7011.8 | 12.0 | 57.0 |
| 752.8 | 8370.0 | 9.3 | 57.0 |
| 715.0 | 9766.3 | 5.7 | 92.0 |
| 700.0 | 10356.1 | 4.6 | 98.0 |
| 664.0 | 11545.7 | 2.6 | 50.0 |
| 651.0 | 12268.5 | 0.6 | 51.0 |
| 624.4 | 13364.5 | -2.1 | 50.0 |
| 608.0 | 14057.2 | -4.7 | 50.0 |
| 582.2 | 15174.5 | -7.4 | 97.0 |
| 564.4 | 15967.0 | -9.6 | 73.0 |
| 556.0 | 16347.7 | -10.1 | 72.0 |
| 539.4 | 17114.5 | -11.5 | 62.0 |
| 526.7 | 17713.6 | -13.4 | 65.0 |
| 514.6 | 18297.4 | -12.1 | 69.0 |
| 500.0 | 19022.5 | -11.6 | 60.0 |
| 482.0 | 19943.0 | -13.7 | 50.0 |
| 435.2 | 22467.3 | -19.9 | 27.0 |
| 412.4 | 23775.6 | -22.1 | 67.0 |
| 400.0 | 24512.2 | -23.8 | 64.0 |
| 368.8 | 26446.4 | -28.5 | 60.0 |
| 300.0 | 31192.3 | -41.1 | 52.0 |

STATION LATITUDE 3989.00 FEET "SL
17 APR. 61 0630 HRS MST
ASCENSION 1.0. 274

UPPER AIR DATA
1070020274
WHITE SANDS
TABLE 10

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | REL. HUM. PERCENT | SPD. OF SOUND METER KNOTS | WIND DATA DIRECTION DEGREES (IN) KNOTS | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|--------------------------------|-----------------------|--|----------------------|------------------------------------|---|-----------------------------|---------------------------|
| 5989.0 | 882.0 | 14.0 | 73.0 | 1064.7 | 0.0 | 0.0 | 1.000291 |
| 4000.0 | 881.7 | 14.0 | 72.9 | 1064.2 | 19.3 | 0.0 | 1.000291 |
| 4500.0 | 862.9 | 14.2 | 69.8 | 1044.4 | 661.0 | 1.8 | 1.000265 |
| 5000.0 | 850.5 | 14.5 | 68.2 | 1025.0 | 662.3 | 3.5 | 1.000278 |
| 5500.0 | 832.3 | 14.5 | 72.2 | 1007.0 | 662.3 | 5.2 | 1.000271 |
| 6000.0 | 820.4 | 14.5 | 61.1 | 984.3 | 662.2 | 7.0 | 1.000264 |
| 6500.0 | 805.8 | 13.6 | 57.0 | 974.9 | 661.0 | 6.9 | 1.000258 |
| 7000.0 | 791.3 | 12.6 | 4.3 | 97.0 | 659.9 | 5.4 | 1.000253 |
| 7500.0 | 777.1 | 11.4 | 3.6 | 58.8 | 947.6 | 4.4 | 1.000248 |
| 8000.0 | 763.0 | 10.2 | 2.9 | 60.6 | 934.6 | 3.8 | 1.000244 |
| 8500.0 | 749.2 | 9.0 | 2.3 | 62.8 | 921.8 | 2.7 | 1.000240 |
| 9000.0 | 735.5 | 7.7 | 1.8 | 66.1 | 904.1 | 1.5 | 1.000236 |
| 9500.0 | 722.1 | 6.4 | 1.2 | 69.3 | 896.7 | 2.2 | 1.000232 |
| 10000.0 | 708.8 | 5.2 | .2 | 69.8 | 884.0 | 4.5 | 1.000227 |
| 10500.0 | 695.7 | 4.3 | -1.5 | 65.6 | 871.9 | 6.9 | 1.000221 |
| 11000.0 | 682.8 | 3.5 | -3.9 | 58.1 | 857.6 | 10.4 | 1.000214 |
| 11500.0 | 670.1 | 2.7 | -6.5 | 50.7 | 844.6 | 13.8 | 1.000207 |
| 12000.0 | 657.6 | 1.3 | -7.8 | 50.6 | 833.0 | 15.1 | 1.000203 |
| 12500.0 | 645.3 | 0 | -8.4 | 52.9 | 821.3 | 16.3 | 1.000199 |
| 13000.0 | 633.1 | -1.2 | -8.6 | 57.0 | 809.5 | 15.9 | 1.000197 |
| 13500.0 | 621.2 | -2.6 | -8.2 | 65.3 | 798.2 | 15.0 | 1.000195 |
| 14000.0 | 609.3 | -4.5 | -6.7 | 84.8 | 788.3 | 97.4 | 1.000195 |
| 14500.0 | 597.6 | -5.8 | -8.4 | 81.5 | 777.1 | 98.2 | 12.5 |
| 15000.0 | 586.2 | -7.0 | -10.6 | 75.2 | 765.8 | 100.0 | 11.7 |
| 15500.0 | 574.8 | -8.3 | -12.3 | 72.6 | 754.9 | 105.4 | 12.1 |
| 16000.0 | 563.7 | -9.6 | -13.9 | 71.1 | 744.1 | 109.0 | 12.6 |
| 16500.0 | 552.7 | -10.4 | -15.4 | 66.6 | 731.6 | 121.1 | 14.4 |
| 17000.0 | 541.8 | -11.3 | -11.8 | 81.6 | 719.6 | 129.7 | 16.7 |
| 17500.0 | 531.2 | -12.7 | -14.1 | 89.5 | 709.5 | 135.0 | 17.6 |
| 18000.0 | 520.7 | -12.8 | -14.0 | 90.5 | 695.6 | 141.4 | 18.1 |
| 18500.0 | 510.5 | -12.0 | -14.6 | 80.9 | 680.0 | 141.8 | 17.1 |
| 19000.0 | 500.4 | -11.8 | -17.8 | 60.9 | 661.3 | 135.0 | 14.7 |
| 19500.0 | 490.6 | -12.6 | -19.9 | 54.8 | 651.8 | 125.3 | 12.5 |
| 20000.0 | 480.9 | -13.8 | -22.0 | 50.1 | 645.5 | 109.0 | 11.1 |
| 20500.0 | 471.3 | -15.1 | -23.0 | 50.7 | 631.6 | 90.1 | 10.8 |
| 21000.0 | 461.8 | -16.3 | -24.0 | 51.3 | 625.9 | 80.3 | 11.3 |
| 21500.0 | 452.6 | -17.5 | -25.0 | 51.9 | 616.4 | 74.6 | 12.0 |
| 22000.0 | 443.5 | -18.6 | -26.0 | 52.4 | 607.0 | 69.6 | 12.7 |
| 22500.0 | 434.6 | -20.0 | -27.0 | 53.3 | 597.6 | 65.3 | 10.9 |
| 23000.0 | 425.8 | -20.8 | -26.7 | 58.7 | 587.4 | 61.4 | 8.9 |

STATION ALTITUDE 3,989.00 FEET "SL
 17 APR. 61 0630 HRS. 1ST
 ASCENSIO. NO. 274

UPPER AIR DATA
 10700.0274
 WHITE SANDS T
 TABLE 10 CON'T

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE DEGREES CELSIUS | REL. HUM. PERCENT | SPEED OF SOUND METER | WIND DATA | | INDEX OF REFRACTION |
|-----------------------------------|-----------------------|--------------------------------|----------------------|----------------------------|-------------------------------|-----------------------------|---------------------------|
| | | | | | AIR DEWPOINT CENTIGRADE | DIR. CTION DEGREES (TIN) | |
| 23500.0 | 417.1 | -21.6 | -26.6 | 64.1 | 577.4 | 618.0 | 1.000133 |
| 24000.0 | 409.6 | -22.6 | -27.2 | 66.1 | 567.8 | 608.8 | 5.4 |
| 24500.0 | 401.2 | -23.8 | -28.6 | 64.0 | 558.8 | 615.4 | 1.000130 |
| 25000.0 | 391.9 | -25.0 | -29.7 | 64.5 | 549.8 | 613.9 | 1.000129 |
| 25500.0 | 383.7 | -26.2 | -30.8 | 65.0 | 541.1 | 612.3 | 4.2 |
| 26000.0 | 375.8 | -27.4 | -31.9 | 65.5 | 532.5 | 610.8 | 1.000125 |
| 26500.0 | 367.9 | -28.6 | -33.0 | 65.8 | 524.0 | 609.3 | 9.8 |
| 27000.0 | 360.0 | -30.0 | -34.5 | 64.4 | 515.6 | 607.6 | 1.000124 |
| 27500.0 | 352.3 | -31.3 | -36.0 | 62.9 | 507.3 | 605.4 | 12.6 |
| 28000.0 | 344.7 | -32.6 | -37.5 | 61.4 | 499.1 | 604.3 | 1.000123 |
| 28500.0 | 337.3 | -34.0 | -39.0 | 59.9 | 491.1 | 602.6 | 17.2 |
| 29000.0 | 330.0 | -35.3 | -40.5 | 58.5 | 483.2 | 600.9 | 1.000122 |
| 29500.0 | 322.9 | -36.6 | -42.0 | 57.0 | 475.5 | 599.2 | 1.000121 |
| 30000.0 | 315.0 | -37.9 | -43.5 | 55.5 | 467.9 | 597.5 | 21.2 |
| 30500.0 | 309.2 | -39.3 | -45.0 | 54.0 | 460.4 | 595.8 | 1.000120 |
| 31000.0 | 302.5 | -40.6 | -46.5 | 52.6 | 453.1 | 594.1 | 1.000119 |

UT DODECIC COORDINATES,
 32.40043 LAT LEG
 106.37033 LON LEG

STATION ALTITUDE 3,889.00 FEET MSL
 17 APR. 01 0630 HRS AST
 ASLNSIO: 1.0. <74

MANDATORY LEVELS
 10700 20274
 WHI TF SURFACE
 TABLE 11

| PRESSURE MILLIBARS | GLO-POTENTIAL FEET | TEMPERATURE | | REL.HUM. PERCENT | WIND DIA DEGREES (TN) | WIND SPEED KNOTS |
|-----------------------|-----------------------|----------------|-----------------------|---------------------|--------------------------|---------------------|
| | | AIR DEGREES | DEWPNT. CENTIGRADE | | | |
| 550.0 | 5012. | 14.5 | 8.2 | 66. | 190.5 | 5.6 |
| 600.0 | 6694. | 13.2 | 4.9 | 57. | 120.8 | 6.3 |
| 750.0 | 8464. | 9.0 | 2.3 | 63. | 354.0 | 2.8 |
| 700.0 | 10326. | 4.6 | -0.8 | 68. | 82.7 | 5.9 |
| 650.0 | 12296. | 0.5 | -8.4 | 51. | 80.5 | 15.8 |
| 600.0 | 14343. | -5.5 | -8.0 | 83. | 98.0 | 12.8 |
| 550.0 | 16601. | -10.6 | -14.9 | 70. | 125.3 | 14.9 |
| 500.0 | 18976. | -11.8 | -18.0 | 60. | 134.8 | 14.6 |
| 450.0 | 21614. | -17.9 | -25.2 | 52. | 75.4 | 12.1 |
| 400.0 | 24471. | -23.8 | -28.7 | 64. | 87.7 | 4.2 |
| 350.0 | 27622. | -31.7 | -36.4 | 62. | 151.1 | 16.1 |
| 300.0 | 31130. | -41.1 | -47.1 | 52. | | |

STATION ALTITUDE 4051.37 FEET MSL
17 APR. 81 0730 HRS WEST
ASCENSION NO. 25

SIGNIFICANT LEVEL DATA
1070180025
LC-37
TABLE 12

GEODETIC COORDINATES
32°40'17.5" LAT DEG
106°31'23.2" LONG DEG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE FEET | TEMPERATURE DEGREES CENTIGRADE | AIR DEMPPOINT | REL. HUM. PERCENT |
|-----------------------|-------------------------------|-----------------------------------|------------------|----------------------|
| 881.4 | 4051.4 | 14.5 | 10.1 | 75.0 |
| 850.0 | 5061.3 | 15.1 | 8.8 | 66.0 |
| 795.6 | 6897.5 | 13.1 | 5.0 | 58.0 |
| 776.4 | 7571.6 | 11.9 | 3.9 | 58.0 |
| 700.0 | 10386.7 | 4.6 | -0.4 | 70.0 |
| 646.8 | 12488.7 | -3 | -9.7 | 47.0 |
| 611.6 | 13952.5 | -4.3 | -5.3 | 93.0 |
| 560.4 | 16200.6 | -9.1 | -9.4 | 98.0 |
| 500.0 | 19087.1 | -12.5 | -15.1 | 81.0 |
| 464.4 | 20930.8 | -16.2 | -19.9 | 73.0 |
| 428.6 | 22905.9 | -19.5 | -23.6 | 70.0 |
| 400.0 | 24582.8 | -23.2 | -27.7 | 66.0 |
| 300.0 | 31277.3 | -40.5 | -47.2 | 48.0 |
| 281.6 | 32671.1 | -44.0 | -50.8 | 46.0 |
| 250.0 | 35274.5 | -51.5 | | |

STATION ALTITUDE 4051.37 FEET MSL
17 APR. 61 0730 HRS MST
ASCENSION NO. 25

UPPER AIR DATA
1070160025
LC-37
TABLE 13

GEOGRAPHIC COORDINATES
32°40'17.5" LAT DEG
106°31'23.2" LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CURIC METER | SPED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES (IN) | SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--|-------------------|------------------------|---------------------|----------------------------------|-------------|---------------------|
| 4051.4 | 381.4 | 14.5 | 10.1 | 75.0 | 1061.8 | 662.5 | .0 | 1.000293 |
| 4500.0 | 386.3 | 14.8 | 9.6 | 71.0 | 1043.9 | 662.8 | 26.0 | 1.000287 |
| 5000.0 | 391.9 | 15.1 | 8.9 | 66.5 | 1024.5 | 663.1 | 26.0 | 1.000280 |
| 5500.0 | 396.7 | 14.6 | 7.9 | 64.1 | 1008.0 | 662.5 | 26.0 | 1.000273 |
| 6000.0 | 402.1 | 14.1 | 6.9 | 61.9 | 992.1 | 661.8 | 26.0 | 1.000267 |
| 6500.0 | 407.1 | 13.5 | 5.9 | 59.7 | 976.5 | 661.1 | 26.0 | 1.000260 |
| 7000.0 | 412.9 | 12.9 | 4.9 | 58.0 | 961.3 | 660.3 | 29.0 | 1.000254 |
| 7500.0 | 418.4 | 12.0 | 4.0 | 58.0 | 947.1 | 659.2 | 33.6 | 1.000249 |
| 8000.0 | 424.3 | 10.8 | 3.3 | 59.8 | 934.1 | 657.7 | 41.2 | 1.000245 |
| 8500.0 | 430.3 | 9.5 | 2.6 | 62.0 | 921.4 | 656.2 | 57.8 | 3.1 |
| 9000.0 | 436.6 | 8.2 | 1.8 | 64.1 | 908.9 | 654.6 | 80.0 | 2.8 |
| 9500.0 | 452.2 | 6.9 | 1.0 | 66.2 | 896.5 | 653.1 | 81.3 | 4.0 |
| 10000.0 | 470.0 | 5.6 | .2 | 68.4 | 884.4 | 651.5 | 77.2 | 5.6 |
| 10500.0 | 497.0 | 4.4 | -.9 | 68.8 | 872.2 | 650.0 | 74.7 | 7.4 |
| 11000.0 | 524.0 | 3.5 | -2.9 | 63.3 | 859.5 | 648.7 | 72.6 | 9.9 |
| 11500.0 | 561.3 | 2.3 | -5.1 | 57.6 | 846.9 | 647.4 | 71.3 | 12.4 |
| 12000.0 | 658.6 | 1.3 | -7.4 | 52.3 | 834.5 | 646.0 | 74.0 | 13.7 |
| 12500.0 | 646.5 | .3 | -9.6 | 47.4 | 822.3 | 644.7 | 78.2 | 14.5 |
| 13000.0 | 634.3 | -1.3 | -7.4 | 63.1 | 811.1 | 643.0 | 82.0 | 15.2 |
| 13500.0 | 622.3 | -2.9 | -6.0 | 78.8 | 800.2 | 641.2 | 86.9 | 15.0 |
| 14000.0 | 610.5 | -4.4 | -5.3 | 93.1 | 789.3 | 639.5 | 91.9 | 14.9 |
| 14500.0 | 598.7 | -5.5 | -6.2 | 94.2 | 777.3 | 638.2 | 96.0 | 14.7 |
| 15000.0 | 587.2 | -6.5 | -7.2 | 95.3 | 765.5 | 636.8 | 99.2 | 14.3 |
| 15500.0 | 575.9 | -7.6 | -8.1 | 96.4 | 753.8 | 635.5 | 102.5 | 14.0 |
| 16000.0 | 564.6 | -6.7 | -9.0 | 97.6 | 742.4 | 634.2 | 104.8 | 14.5 |
| 16500.0 | 553.8 | -9.5 | -9.9 | 96.0 | 730.2 | 633.2 | 106.6 | 15.2 |
| 17000.0 | 543.0 | -10.0 | -10.9 | 93.3 | 717.6 | 632.5 | 108.3 | 15.9 |
| 17500.0 | 532.4 | -10.6 | -11.9 | 90.3 | 705.2 | 631.8 | 111.1 | 16.5 |
| 18000.0 | 521.9 | -11.2 | -12.9 | 87.4 | 693.0 | 631.0 | 113.0 | 17.1 |
| 18500.0 | 511.7 | -11.8 | -13.9 | 84.5 | 681.1 | 630.3 | 112.5 | 16.6 |
| 19000.0 | 501.7 | -12.4 | -14.9 | 81.5 | 669.3 | 629.5 | 109.0 | 15.5 |
| 19500.0 | 491.6 | -13.3 | -16.1 | 79.2 | 658.5 | 628.4 | 104.2 | 14.5 |
| 20000.0 | 482.0 | -14.3 | -17.5 | 77.0 | 648.0 | 627.1 | 92.3 | 14.0 |
| 20500.0 | 472.5 | -15.3 | -18.8 | 74.9 | 637.7 | 625.9 | 80.1 | 14.2 |
| 21000.0 | 463.1 | -16.3 | -20.0 | 72.9 | 627.5 | 624.7 | 72.3 | 14.3 |
| 21500.0 | 453.6 | -17.2 | -20.9 | 72.1 | 616.9 | 623.6 | 70.1 | 13.6 |
| 22000.0 | 444.7 | -18.0 | -21.9 | 71.4 | 606.5 | 622.6 | 67.7 | 13.0 |
| 22500.0 | 435.7 | -18.8 | -22.8 | 70.6 | 596.3 | 621.5 | 74.6 | 11.5 |
| 23000.0 | 426.9 | -19.7 | -23.8 | 69.8 | 586.4 | 620.4 | 90.0 | 10.1 |
| 23500.0 | 418.2 | -20.6 | -25.0 | 68.6 | 577.0 | 619.1 | 108.4 | 9.7 |

STATION ALTITUDE 4051.37 FEET MSL
 17 APR. H1 0730 HRS MST
 ASCENSION NO. 25

UPPER AIR DATA
 1n70160025
 LC-37

TABLE 13 CON'T

| GEOMETRIC ALTITUDE HSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | REFL. HUM. PERCENT | REFL. HUM. GM/CURIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES (TN) | SPEED KNOTS | INDEX OF REFRACTION |
|--------------------------------|-----------------------|---|-----------------------|---------------------------------|----------------------------|--|----------------|---------------------------|
| 24000.0 | 409.7 | -21.9 | -26.3 | 67.4 | 567.7 | 617.7 | 122.6 | 11.4 |
| 24500.0 | 401.4 | -25.0 | -27.5 | 66.2 | 558.7 | 616.3 | 132.1 | 13.7 |
| 25000.0 | 392.9 | -24.3 | -29.0 | 64.9 | 549.7 | 614.7 | 138.4 | 1.000126 |
| 25500.0 | 384.5 | -25.6 | -30.4 | 63.5 | 540.8 | 613.1 | 141.4 | 1.000123 |
| 26000.0 | 376.9 | -26.9 | -31.9 | 62.2 | 532.1 | 611.5 | 143.6 | 1.000121 |
| 26500.0 | 368.4 | -28.2 | -33.3 | 60.8 | 523.6 | 609.9 | 145.6 | 21.2 |
| 27000.0 | 360.5 | -29.4 | -34.8 | 59.5 | 515.2 | 608.3 | 147.5 | 21.7 |
| 27500.0 | 352.9 | -30.7 | -36.2 | 58.2 | 507.0 | 606.6 | 149.1 | 22.2 |
| 28000.0 | 345.4 | -32.0 | -37.7 | 56.8 | 498.9 | 605.0 | 151.1 | 22.6 |
| 28500.0 | 338.0 | -33.3 | -39.1 | 55.5 | 490.9 | 603.4 | 154.3 | 22.8 |
| 29000.0 | 330.6 | -34.6 | -40.6 | 54.1 | 483.1 | 601.7 | 157.5 | 23.2 |
| 29500.0 | 323.0 | -35.9 | -42.0 | 52.8 | 475.4 | 600.1 | 160.4 | 1.000107 |
| 30000.0 | 315.9 | -37.2 | -43.5 | 51.4 | 467.9 | 598.5 | 160.7 | 23.6 |
| 30500.0 | 308.5 | -38.5 | -44.9 | 50.1 | 460.4 | 596.8 | 161.0 | 1.000103 |
| 31000.0 | 303.6 | -39.8 | -46.4 | 48.7 | 453.2 | 595.2 | 160.6 | 23.8 |
| 31500.0 | 297.0 | -41.1 | -47.8 | 47.7 | 445.8 | 593.5 | 158.9 | 24.3 |
| 32000.0 | 290.4 | -42.3 | -49.1 | 47.0 | 438.2 | 591.9 | 157.0 | 24.8 |
| 32500.0 | 284.0 | -43.6 | -50.4 | 46.2 | 430.9 | 590.3 | | 1.000096 |
| 33000.0 | 277.6 | -44.9 | -52.8 | 46.2** | 423.7 | 588.5 | | 1.000095 |
| 33500.0 | 271.3 | -46.4 | -56.2 | 31.4** | 416.7 | 586.7 | | 1.000093 |
| 34000.0 | 265.1 | -47.8 | -60.0 | 22.5** | 409.8 | 584.6 | | 1.000091 |
| 34500.0 | 259.1 | -49.3 | -65.0 | 13.7** | 403.1 | 582.9 | | 1.000090 |
| 35000.0 | 253.2 | -50.7 | -73.3 | 4.9** | 396.5 | 581.0 | | 1.000088 |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FEET MSL
17 APR. 81 0730 HRS AST
ASCENSION NO. 25

MANDATORY LEVELS
1070160025
LC-37
TABLE 14

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

| PRESSURE MILLIBARS | GEOPOTENTIAL FEET | TEMPERATURE | | REL. HUM. PERCENT | DIRECTION DEGREES (TN) | WIND DATA SPEED KNOTS |
|-----------------------|----------------------|----------------|-----------------------|----------------------|---------------------------|-----------------------------|
| | | AIR DEGREES | DEPOINT CENTIGRADE | | | |
| 850.0 | 5058. | 15.1 | 8.6 | 68. | 26.0 | 2.2 |
| 800.0 | 6739. | 13.3 | 5.4 | 59. | 26.9 | 5.4 |
| 750.0 | 8512. | 9.5 | 2.0 | 62. | 58.4 | 3.1 |
| 700.0 | 10376. | 4.6 | -4 | 70. | 75.4 | 6.9 |
| 650.0 | 12345. | .6 | -9.0 | 48. | 77.0 | 14.2 |
| 600.0 | 14431. | -5.4 | -6.1 | 94. | 95.7 | 14.7 |
| 550.0 | 16656. | -9.7 | -10.3 | 95. | 107.1 | 15.4 |
| 500.0 | 19060. | -12.5 | -15.1 | 81. | 108.4 | 15.3 |
| 450.0 | 21676. | -17.5 | -21.3 | 72. | 69.2 | 13.4 |
| 400.0 | 24542. | -23.2 | -27.7 | 66. | 133.1 | 14.1 |
| 350.0 | 27699. | -31.2 | -36.8 | 58. | 149.6 | 22.4 |
| 300.0 | 31215. | -40.5 | -47.2 | 48. | 159.8 | 24.1 |
| 250.0 | 35197. | -51.5 | | | | |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3489.60 FEET "SL
17 APR. 1968 0830 HRS. AST
ASUMPTION NO. 275

SIGNIFICANT LEVEL DATA

1070020275
WHITE SANDS
32.40043 LAT. LAT.
106.37033 LON. LON. DEG

TABLE 15

| PRESSURE GEOMETRIC MILLIBARS MSL FEET | ALTITUDE MILLIBARS MSL FEET | TEMPERATURE | | |
|--|--------------------------------|---------------------------|------------------------------|----------------------|
| | | AIR DEGREES CENTIGRADE | DEWPNT DEGREES CENTIGRADE | REL. HUM. PERCENT |
| 682.9 | 3989.0 | 16.8 | 9.5 | 66.0 |
| 672.6 | 4315.7 | 14.0 | 7.5 | 65.0 |
| 650.0 | 5044.3 | 14.4 | 7.5 | 63.0 |
| 314.4 | 6230.3 | 13.0 | 6.1 | 55.0 |
| 700.0 | 10350.3 | 4.2 | 7.7 | 78.0 |
| 666.0 | 11676.5 | 1.4 | -5.7 | 59.0 |
| 630.4 | 13121.6 | -2.3 | -8.8 | 61.0 |
| 604.8 | 14198.0 | -5.7 | -10.6 | 53.0 |
| 500.0 | 19040.1 | -13.1 | -16.1 | 78.0 |
| 400.0 | 24521.3 | -23.6 | -27.2 | 73.0 |
| 300.0 | 31207.6 | -40.5 | -45.7 | 57.0 |

STATION LATITUDE 34°49.00 FEET MSL
 17 APR. 11 0630 HRS LST
 ASCENSION, 1.0. <75

UPPER AIR DATA
 10700Z 0275
 WHITE SANDS
 TABLE 16

| GEOPHYSICAL ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | REL. HUM. DEWPNT PERCENT | DENSITY GM/CURIC METER | WIND DATA DIRECTION DEGREES (TIN) SPEED KIOTS | INDEX OF REFRACTION |
|-------------------------------------|-----------------------|--|--------------------------------|------------------------------|---|---------------------------|
| 3989.0 | 1000.9 | 15.8 | 9.5 | 66.0 | 1059.0 0659.9 0 | 1.00290 |
| 4000.0 | 982.6 | 15.7 | 9.4 | 66.0 | 1058.9 0658.8 29.0 | 0.0 |
| 4500.0 | 860.8 | 14.1 | 7.5 | 64.5 | 1046.5 061.5 29.0 | 1.2 |
| 5000.0 | 851.4 | 14.4 | 7.5 | 63.1 | 1026.8 062.1 29.0 | 1.00276 |
| 5500.0 | 835.1 | 13.9 | 6.9 | 63.0 | 1010.3 061.5 29.0 | 3.5 |
| 6000.0 | 821.2 | 13.3 | 6.4 | 63.0 | 994.4 060.8 29.0 | 4.6 |
| 6500.0 | 806.4 | 12.4 | 5.8 | 64.0 | 979.4 059.8 32.1 | 1.00266 |
| 7000.0 | 791.7 | 11.4 | 5.2 | 65.8 | 965.3 058.5 38.7 | 4.3 |
| 7500.0 | 777.3 | 10.3 | 4.6 | 67.6 | 951.4 057.2 46.4 | 3.8 |
| 8000.0 | 765.1 | 9.2 | 3.9 | 69.4 | 937.7 056.0 50.5 | 3.7 |
| 8500.0 | 749.2 | 8.2 | 3.3 | 71.3 | 924.2 054.7 53.1 | 3.5 |
| 9000.0 | 735.6 | 7.1 | 2.6 | 73.1 | 911.0 053.4 52.4 | 2.9 |
| 9500.0 | 722.2 | 6.0 | 1.9 | 74.9 | 897.9 052.1 57.5 | 3.3 |
| 10000.0 | 709.1 | 4.9 | 1.2 | 76.7 | 885.1 050.4 63.3 | 4.5 |
| 10500.0 | 690.1 | 3.9 | 0.0 | 75.9 | 872.4 049.5 60.9 | 6.0 |
| 11000.0 | 683.1 | 2.8 | -2.3 | 68.7 | 859.9 048.1 64.0 | 1.00243 |
| 11500.0 | 670.4 | 1.8 | -4.8 | 61.5 | 847.5 046.7 70.3 | 1.00239 |
| 12000.0 | 657.9 | 0.6 | -6.4 | 59.4 | 835.4 045.2 76.6 | 1.00234 |
| 12500.0 | 645.5 | -0.7 | -7.5 | 60.1 | 823.7 043.7 81.5 | 1.00230 |
| 13000.0 | 633.3 | -2.0 | -8.5 | 60.8 | 812.1 042.1 86.4 | 1.00225 |
| 13500.0 | 621.3 | -3.5 | -7.8 | 72.2 | 801.0 040.4 89.1 | 1.00217 |
| 14000.0 | 609.4 | -5.1 | -6.9 | 87.1 | 790.2 038.0 90.1 | 11.3 |
| 14500.0 | 597.7 | -6.2 | -7.2 | 92.1 | 778.1 037.3 92.1 | 12.9 |
| 15000.0 | 585.0 | -6.9 | -8.2 | 90.5 | 765.2 036.3 93.0 | 14.7 |
| 15500.0 | 574.6 | -7.7 | -9.2 | 89.0 | 752.6 035.2 95.0 | 14.9 |
| 16000.0 | 563.5 | -8.5 | -10.2 | 87.4 | 740.2 034.4 99.9 | 15.1 |
| 16500.0 | 552.5 | -9.2 | -11.1 | 85.9 | 727.9 033.5 111.4 | 1.00196 |
| 17000.0 | 541.7 | -10.0 | -12.1 | 84.3 | 715.9 032.5 111.4 | 1.00195 |
| 17500.0 | 531.2 | -10.7 | -13.1 | 82.8 | 704.1 031.0 120.4 | 1.00192 |
| 18000.0 | 520.9 | -11.5 | -14.1 | 81.2 | 692.5 030.0 122.0 | 1.00188 |
| 18500.0 | 510.7 | -12.3 | -15.0 | 79.7 | 681.1 029.7 122.0 | 1.00184 |
| 19000.0 | 500.8 | -13.0 | -16.0 | 78.1 | 669.8 028.7 122.0 | 1.00180 |
| 19500.0 | 490.7 | -14.0 | -17.0 | 77.6 | 653.8 027.0 122.0 | 1.00176 |
| 20000.0 | 480.8 | -15.0 | -18.1 | 77.1 | 646.1 026.3 122.0 | 1.00173 |
| 20500.0 | 471.1 | -15.9 | -19.1 | 76.7 | 637.5 025.1 122.0 | 1.00169 |
| 21000.0 | 461.7 | -16.9 | -20.1 | 76.2 | 627.0 023.3 122.0 | 1.00166 |
| 21500.0 | 452.4 | -17.9 | -21.1 | 75.8 | 616.8 022.7 122.0 | 1.00162 |
| 22000.0 | 443.2 | -18.9 | -22.1 | 75.3 | 606.7 021.5 122.0 | 1.00158 |
| 22500.0 | 434.3 | -19.9 | -23.1 | 74.8 | 596.8 020.3 122.0 | 1.00155 |
| 23000.0 | 425.6 | -20.8 | -24.2 | 74.4 | 587.1 019.1 122.0 | 1.00152 |

STATION LATITUDE 3489.00 FEET ASL
17 APR. 81 0830 HRS, '81
ASCENSIO. NO. 475

PPTR AIR DATA
1n70020275
WHITE SANDS
TABLE 16 CONT

UTODGET COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CELSIUS | DEWPOINT DEGREES CELSIUS | REL.HUM. PERCENT | SOUND METER | SPEED OF WIND KNOTS | DIRECTION DEGREES (TIN) | WIND DATA KNOTS | INDEX OF REFRACTION |
|--------------------------------|-----------------------|---------------------------------------|-----------------------------|---------------------|----------------|------------------------------|----------------------------|--------------------|---------------------------|
| 23500.0 | 417.0 | -21.8 | -25.2 | 73.9 | 577.5 | 617.9 | 106.6 | 13.7 | 1.000123 |
| 24000.0 | 405.6 | -22.8 | -26.2 | 73.6 | 568.1 | 616.6 | 114.6 | 13.6 | 1.000121 |
| 24500.0 | 400.3 | -23.8 | -27.2 | 73.0 | 558.9 | 615.4 | 123.4 | 14.9 | 1.000120 |
| 25000.0 | 391.8 | -25.0 | -28.6 | 71.9 | 549.8 | 615.9 | 130.6 | 16.4 | 1.000126 |
| 25500.0 | 385.5 | -26.2 | -30.0 | 70.7 | 540.8 | 612.5 | 134.0 | 18.2 | 1.000124 |
| 26000.0 | 375.3 | -27.5 | -31.3 | 69.5 | 532.0 | 610.7 | 137.3 | 20.0 | 1.000121 |
| 26500.0 | 367.4 | -28.7 | -32.7 | 68.3 | 523.4 | 609.2 | 139.6 | 21.9 | 1.000119 |
| 27000.0 | 359.5 | -30.0 | -34.1 | 67.1 | 514.9 | 607.6 | 141.7 | 22.7 | 1.000117 |
| 27500.0 | 351.9 | -31.2 | -35.5 | 65.9 | 506.6 | 606.0 | 143.0 | 23.4 | 1.000115 |
| 28000.0 | 344.4 | -32.5 | -36.9 | 64.7 | 498.4 | 604.4 | 145.4 | 24.2 | 1.000113 |
| 28500.0 | 337.1 | -33.7 | -38.2 | 63.5 | 490.3 | 602.9 | 148.2 | 24.0 | 1.000111 |
| 29000.0 | 329.9 | -35.0 | -39.6 | 62.3 | 482.4 | 601.3 | 151.0 | 23.9 | 1.000109 |
| 29500.0 | 322.9 | -36.2 | -41.0 | 61.1 | 474.7 | 599.7 | 153.6 | 23.9 | 1.000107 |
| 30000.0 | 315.0 | -37.5 | -42.4 | 59.9 | 467.0 | 598.1 | 156.5 | 23.9 | 1.000105 |
| 30500.0 | 309.3 | -38.7 | -43.7 | 58.7 | 459.5 | 596.5 | 152.2 | 23.9 | 1.000103 |
| 31000.0 | 302.7 | -40.0 | -45.1 | 57.5 | 452.2 | 594.9 | 151.0 | 23.9 | 1.000101 |

STATION ALTITUDE 3489.000 FFFF SL
 17 APR. 61 0830 HRS MST
 ASCENSIO. NO. 275

MANDATORY LEVELS
 1070020275
 WHITE SANDS
 TABLE 17

1070020275 LAT DEG
 32°40.043
 106.37033 LOI. DEG

| PRESSURE OF POTENTIAL MILLIBARS | FLEET | TEMPERATURE | | | REL.HUM. PERCENT | WIND DIRECTION DEGREES (TN) | WIND SPEED KNOTS |
|------------------------------------|--------|----------------|----------------------|-------|---------------------|--------------------------------|---------------------|
| | | ATR DEGREES | DEWPNT CENTIGRADE | PLCNT | | | |
| 850.0 | 5041. | 14.4 | 7.5 | 65. | 29.0 | 24 | |
| 800.0 | 6717. | 12.0 | 5.5 | 65. | 34.8 | 4.6 | |
| 750.0 | 6481. | 8.2 | 3.3 | 71. | 53.2 | 3.5 | |
| 700.0 | 10340. | 4.2 | •7 | 76. | 65.9 | 2.3 | |
| 650.0 | 12305. | •2 | -7.1 | 60. | 79.8 | 14.0 | |
| 600.0 | 14387. | -6.0 | -7.0 | 92. | 91.6 | 14.0 | |
| 550.0 | 16611. | -9.4 | -11.4 | 86. | 115.9 | 12.8 | |
| 500.0 | 19013. | -13.1 | -16.1 | 78. | 110.8 | 10.8 | |
| 450.0 | 21624. | -18.2 | -21.4 | 76. | 98.0 | 22.0 | |
| 400.0 | 24480. | -23.8 | -27.2 | 73. | 123.6 | 14.9 | |
| 350.0 | 27632. | -31.6 | -35.8 | 66. | 144.2 | 23.7 | |
| 300.0 | 31145. | -40.5 | -45.7 | 57. | | | |

STATION ALTITUDE 3,989.00 FEET MSL
 17 APR. 01 0930 HRS MST
 AEROMETEOROLOGIC
 OBSERVATION NO. 276

SIGNIFICANT LEVEL DATA
 IN 70020270
 TABLE WITH STATUS

GEODETIC COORDINATES,
 32.40043 LAT DEG
 106.37033 LONG DEG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE METERS MSL | TEMPERATURE DEGREES CENTIGRADE | AIR DEWPOINT DEGREES CENTIGRADE | R.H. PERCENT |
|-----------------------|-------------------------------------|-----------------------------------|---------------------------------------|-----------------|
| 1013.0 | 3989.0 | 17.4 | 9.1 | 58.0 |
| 868.0 | 4468.0 | 14.8 | 6.1 | 64.0 |
| 850.0 | 5049.0 | 13.5 | 7.3 | 66.0 |
| 838.4 | 5430.3 | 13.5 | 9.6 | 55.0 |
| 750.8 | 8459.0 | 8.0 | 2.2 | 64.0 |
| 700.0 | 10350.1 | 4.1 | 0.8 | 79.0 |
| 657.0 | 12001.9 | 0.0 | -5.8 | 85.0 |
| 604.2 | 14216.5 | -6.2 | -7.4 | 91.0 |
| 569.6 | 15729.4 | -9.3 | -9.2 | 93.0 |
| 544.8 | 16865.1 | -9.2 | -10.3 | 92.0 |
| 536.4 | 17261.2 | -9.8 | -9.9 | 92.0 |
| 500.0 | 19043.3 | -11.6 | -14.4 | 81.0 |
| 400.0 | 24539.1 | -23.6 | -27.2 | 73.0 |
| 300.0 | 31225.5 | -40.5 | -45.2 | 60.0 |

STATION ALTITUDE 3480.00 FFFF1 "SL
 17 APR. '11 0930 HRS AST
 ASCENSION NO. 276

UPPLR AIR DATA
 1070020276
 WHITE LANDS
 TABLE 19

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES CENTIGRADE | REL.HUM. PERCENT | SPEC. WT. GM/CURIL METER | DENSITY SOUND KNOTS | WIND DATA DEGREES (IN) KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|------------------------------------|------------------|--------------------------|---------------------|------------------------------|---------------------|
| 3989.0 | 883.0 | 17.4 | 9.1 | 58.0 | 105.5 | 665.7 | 1.000217 |
| 4000.0 | 882.7 | 17.3 | 9.0 | 58.1 | 1053.3 | 666.0 | 1.000216 |
| 4500.0 | 861.0 | 14.7 | 8.0 | 64.1 | 1044.2 | 662.6 | 1.000212 |
| 5000.0 | 851.5 | 13.6 | 7.3 | 65.8 | 1029.7 | 661.2 | 1.000217 |
| 5500.0 | 836.3 | 13.4 | 6.6 | 55.2 | 1012.8 | 660.7 | 1.000215 |
| 6000.0 | 821.2 | 12.6 | 4.2 | 56.7 | 997.4 | 659.6 | 1.000211 |
| 6500.0 | 806.4 | 11.8 | 3.8 | 58.2 | 982.2 | 658.8 | 1.000216 |
| 7000.0 | 791.8 | 11.0 | 3.4 | 59.7 | 967.2 | 657.9 | 1.000212 |
| 7500.0 | 777.5 | 10.2 | 3.0 | 61.2 | 952.5 | 656.9 | 1.000248 |
| 8000.0 | 762.5 | 9.3 | 2.6 | 62.6 | 938.1 | 656.0 | 1.000244 |
| 8500.0 | 749.7 | 8.5 | 2.2 | 64.3 | 923.9 | 655.0 | 1.000240 |
| 9000.0 | 735.9 | 7.3 | 1.9 | 68.3 | 910.6 | 654.6 | 1.000237 |
| 9500.0 | 722.4 | 6.1 | 1.5 | 72.3 | 897.9 | 652.2 | 6.9 |
| 10000.0 | 709.1 | 4.9 | 1.1 | 76.2 | 885.8 | 650.8 | 7.0 |
| 10500.0 | 696.1 | 3.7 | 0.2 | 77.7 | 872.8 | 649.3 | 8.1 |
| 11000.0 | 683.1 | 2.5 | -1.8 | 73.5 | 860.8 | 647.8 | 10.2 |
| 11500.0 | 670.3 | 1.2 | -3.7 | 69.3 | 848.6 | 646.2 | 11.8 |
| 12000.0 | 659.8 | 0.0 | -5.8 | 65.0 | 837.1 | 644.6 | 6.9 |
| 12500.0 | 649.3 | -1.4 | -6.0 | 70.8 | 825.4 | 643.0 | 13.1 |
| 13000.0 | 639.1 | -2.8 | -6.3 | 76.7 | 813.9 | 641.3 | 14.4 |
| 13500.0 | 621.0 | -4.2 | -6.7 | 82.6 | 802.6 | 639.0 | 72.8 |
| 14000.0 | 609.2 | -5.6 | -7.2 | 88.5 | 791.5 | 637.9 | 15.5 |
| 14500.0 | 597.6 | -6.6 | -7.8 | 91.4 | 779.3 | 636.7 | 17.0 |
| 15000.0 | 586.0 | -7.3 | -8.4 | 92.0 | 766.3 | 635.9 | 16.3 |
| 15500.0 | 574.7 | -8.0 | -9.0 | 92.7 | 753.5 | 635.0 | 15.0 |
| 16000.0 | 563.6 | -8.5 | -9.5 | 92.8 | 740.4 | 634.4 | 13.9 |
| 16500.0 | 552.7 | -8.9 | -9.9 | 92.3 | 727.2 | 633.9 | 9.2 |
| 17000.0 | 541.9 | -9.1 | -10.1 | 92.0 | 713.5 | 633.7 | 102.9 |
| 17500.0 | 531.4 | -9.2 | -10.5 | 90.5 | 699.9 | 633.5 | 111.0 |
| 18000.0 | 521.0 | -10.0 | -11.7 | 87.4 | 686.6 | 632.5 | 118.6 |
| 18500.0 | 510.8 | -10.9 | -13.0 | 84.4 | 677.4 | 631.4 | 116.6 |
| 19000.0 | 500.9 | -11.7 | -14.3 | 81.3 | 666.4 | 630.4 | 115.2 |
| 19500.0 | 490.8 | -12.8 | -15.5 | 80.3 | 655.8 | 629.11 | 114.2 |
| 20000.0 | 481.0 | -13.9 | -16.6 | 79.6 | 645.4 | 627.7 | 114.4 |
| 20500.0 | 471.3 | -15.0 | -17.8 | 78.9 | 635.2 | 626.3 | 20.1 |
| 21000.0 | 461.8 | -16.1 | -19.0 | 78.2 | 625.1 | 625.11 | 21.8 |
| 21500.0 | 452.5 | -17.2 | -20.1 | 77.4 | 615.2 | 625.0 | 22.9 |
| 22000.0 | 443.4 | -16.3 | -21.3 | 76.7 | 605.5 | 622.3 | 24.1 |
| 22500.0 | 434.5 | -19.3 | -22.5 | 76.0 | 595.9 | 620.9 | 23.9 |
| 23000.0 | 425.8 | -20.4 | -23.7 | 75.2 | 586.5 | 619.6 | 23.0 |

STATION 389000 FEET MSL
17 APR. 0930 hrs MSI
AUSANSIO, 10. 76

TABLE 19 CON'T
WHITE, AND
10700, 11270
U.S. AIR MAIL

| GEODETIC PRESSURE | TEMPERATURE | REL. HUM. | SPEED OF WIND DATA | INDEX OF REFRACTION: |
|----------------------|-----------------------|-----------|------------------------------|----------------------------|
| ALITUDE MSL FEET | AIR DEWPONT | PERCENT | WIND DIRECTION IN DEGREES | WIND SPEED IN KNOTS |
| IN MILLIARS | DEGREES CENTIGRADE | METER | WIND DIRECTION IN DEGREES | WIND SPEED IN KNOTS |
| 23500.0 | 417.2 | -21.5 | -24.8 | 74.5 |
| 24000.0 | 409.9 | -22.6 | -26.0 | 73.8 |
| 24500.0 | 400.6 | -23.7 | -27.2 | 73.1 |
| 25000.0 | 392.1 | -25.0 | -29.5 | 72.1 |
| 25500.0 | 383.8 | -26.2 | -29.8 | 71.1 |
| 26000.0 | 375.6 | -27.4 | -31.2 | 70.2 |
| 26500.0 | 367.6 | -28.7 | -32.5 | 69.2 |
| 27000.0 | 359.8 | -29.9 | -33.9 | 68.2 |
| 27500.0 | 352.2 | -31.2 | -35.2 | 67.2 |
| 28000.0 | 344.7 | -32.4 | -36.6 | 66.3 |
| 28500.0 | 337.1 | -33.7 | -37.9 | 65.3 |
| 29000.0 | 330.0 | -34.9 | -39.3 | 64.3 |
| 29500.0 | 322.1 | -36.1 | -40.6 | 63.4 |
| 30000.0 | 314.2 | -37.4 | -41.9 | 62.4 |
| 30500.0 | 304.5 | -38.7 | -43.3 | 61.4 |
| 31000.0 | 302.9 | -39.9 | -44.6 | 60.4 |

STATION ALTITUDE 3,890.00 FEET MSL
 17 APR. 1961
 ASSTNSIO. 10. 276

ATMOSPHERIC LEVELS
 16700.00276
 WHITE CANUS
 TABLE 20

ATMOSPHERIC COORDINATES,
 32°40.043 LAT DEG
 106.57033 LONG DEG

| PRESSURE AT ALTITUDE MILLIBARS | FLEET | DEGREES CENTIGRADE | TEMPERATURE | | WIND DIRECTION DEGREES (TN) | WIND VELOCITY KNOTS |
|-----------------------------------|--------|-----------------------|----------------|-----------------------|--------------------------------|------------------------|
| | | | AIR DEGREES | DEGREES CENTIGRADE | | |
| 450.0 | 5006. | 13.5 | 7.3 | 60. | 209.5 | 1.8 |
| 400.0 | 6718. | 11.4 | 3.7 | 59. | 69.1 | 1.5 |
| 350.0 | 8480. | 8.5 | 2.2 | 64. | 48.0 | 6.5 |
| 300.0 | 10340. | 4.1 | 0.6 | 79. | 65.1 | 7.5 |
| 250.0 | 12302. | -0.9 | -5.9 | 69. | 67.5 | 15.9 |
| 200.0 | 14379. | -6.4 | -7.6 | 91. | 78.0 | 17.0 |
| 150.0 | 16602. | -9.0 | -10.0 | 94. | 94.5 | 15.6 |
| 100.0 | 19017. | -11.8 | -14.4 | 81. | 115.1 | 6.0 |
| 50.0 | 21637. | -17.5 | -20.5 | 77. | 117.4 | 24.1 |
| 0.0 | 24498. | -23.8 | -27.2 | 73. | 117.9 | 22.7 |
| 350.0 | 27650. | -31.6 | -35.6 | 67. | 142.0 | 25.6 |
| 300.0 | 31163. | -40.5 | -45.2 | 60. | | |

FILMED

7 8